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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,449	06/27/2003	Rafael Carbunaru	AB-233U1	6613

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ADVANCED BIONICS CORPORATION
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EXAMINER

FAULCON JR, LENWOOD

ART UNIT PAPER NUMBER

3762

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No. 10/609,449	Applicant(s) CARBUNARU ET AL.	
	Examiner Lenwood Faulcon, Jr.	Art Unit 3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/15/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Brownlee et al. (U.S. Patent No. 4,134,408).

Brownlee et al. teaches of an energy conservation system for use with an implantable cardiac pacemaker, comprising an internal rechargeable battery to be included in the implantable portion of the system (col. 2 lines 28-31). Brownlee et al. also teaches of an external energy source that may include a charging coil (col. 2 lines 6-9) or the external energy source may operate by radio frequencies (col. 2 lines 22-25) and be housed within a chair or bed (col. 2 lines 15-21). Brownlee et al. further teaches that the external energy source can recharge the internal rechargeable battery (col. 5 lines 35-41).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brownlee et al. (U.S. Patent No. 4,134,408) as applied to claim 1 above, in view of Griffith (U.S. Patent No. 6,073,050).

Griffith teaches of an efficient integrated RF telemetry transmitter for use with an implantable device, which comprises the use of frequency key shifting telemetry (col. 15 lines 38-41) and on-off keying telemetry (col. 3 lines 61-65).

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Brownlee et al. with the teachings of Griffith. Brownlee et al. and Griffith both teach of implantable devices that receive power from an external source and thus teach of analogous arts. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Brownlee et al. by including frequency key shifting telemetry and/or on-off keying telemetry in order to provide more efficient communication between an external and internal device, as taught by Griffith. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Brownlee et al. and Griffith to have the limitations of claims 2 and 3.

5. Claims 4-26 and 29-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brownlee et al. (U.S. Patent No. 4,134,408) as applied to claim 1 above, and further in view of Kung (U.S. Patent No. 6,212,430) and Seelye (U.S. Patent No. 5,642,030).

Kung teaches of a transcutaneous energy transmission device, comprises primary coils external to a human body and an implanted secondary coil (col. 2 lines 23-

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30), in which the external coils provide a source of energy for an implanted rechargeable battery (col. 10 lines 8-12). Kung also teaches that the external primary coils may be housed in furniture and/or bed covering (col. 2 lines 28-31). Kung further teaches that the implanted coil can be used to provide power for the operation of an implanted medical device (col. 2 lines 25-28).

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Brownlee et al. with the teachings of Kung. Brownlee et al. and Kung both teach of implantable devices that receive power from an external source and thus teach of analogous arts. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Brownlee et al. to include multiple external coils for providing an efficient source of energy as taught by Kung.

Seelye teaches of a charge control circuit that is capable of charging a completely discharged zero-volt battery (col. 3 lines 26-30). It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Brownlee et al and Kung with the teachings of Seelye. Brownlee et al., Kung and Seelye all teach of system that comprise the use of rechargeable batteries and thus teach of analogous arts. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system of Brownlee et al. and Kung by including charge control circuits that are capable of recharging a completely discharged zero-volt rechargeable battery for the purposes of providing a more efficient and capable charge circuit as taught by Seelye.

It would have also been obvious to one having ordinary skill in the art at the time of the invention to modify the systems as taught by Brownlee et al. and Kung to include a temperature sensing circuitry in the furniture that triggers an automatic power shut-off circuitry when the temperature in the charging coil exceeds a predetermined limit, since this type of sensing is commonly known in the art to provide safety to a person in contact with the furniture and to prevent damage to the device itself. It would have also been obvious to one having ordinary skill in the art at the time of the invention to modify the systems as taught by Brownlee et al. and Kung to include impedance matching networks of various values, since impedance matching networks are commonly known in the art for providing efficient transitions of power. Further, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the systems as taught by Brownlee et al. and Kung to include various wires for the coils, variable power outputs, apply various frequencies to a charging coil in order to reset the charging coil, to include various materials and dimensions for the padding that houses the external coils in the furniture, as these modifications would have been obvious to one having ordinary skill in the art as deemed necessary to meet a desired need.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Brownlee et al, Kung and Seelye to have the limitations of claims 4-26 and 29-43.

6. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brownlee et al. (U.S. Patent No. 4,134,408) in view of Kung (U.S. Patent No. 6,212,430) and Seelye (U.S. Patent No. 5,642,030) as applied to claim 4-26 and 29-43

above, and further in view of Griffith (U.S. Patent No. 6,073,050) as applied to claims 2 and 3 above.

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Brownlee et al. with the teachings of Kung and Seelye for the reasons stated above and to further combine these teachings with the teachings of Griffith. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Brownlee et al. and Kung by including frequency key shifting telemetry and/or on-off keying telemetry in order to provide more efficient communication between an external and internal device, as taught by Griffith. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine teachings of Brownlee et al., Kung, Seelye and Griffith to have the limitations of claims 27-28.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Barreras (U.S. Patent No. 5,769,877), Sun et al. (U.S. Patent No. 5,861,019), Richmond et al. (U.S. Patent No. 6,061,596), Kuiper (U.S. Patent No. 6,148,235), Schulman et al. (U.S. Patent No. 6,164,284), Kung (U.S. Patent No. 6,366,817), Kung (U.S. Patent No. 6,400,991), Andrews (U.S. 2002/0055779), Schulman et al. (U.S. 2003/0078634), Cameron et al. ("Micromodular Implants to Provide Electrical Stimulation of Paralyzed Muscles and Limbs," IEEE Transactions on Biomedical Engineering, Vol. 44, No. 9, Sept. 1997, pages 781-790).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lenwood Faulcon, Jr. whose telephone number is 571-272-6090. The examiner can normally be reached on Monday-Thursday from 9 to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D. Sykes, can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Lenwood Faulcon, Jr.


George Manuel

Primary Examiner